

# *The Education System*

This chapter deals with developments in the Israeli education system which serves more than two million students. It begins by presenting main developments and changes in the past decade in the student and teacher population. The second part discusses the financial resources that are available to education, as reflected in government expenditure, its share in overall national education expenditure, and the state budget. The third part discusses changes in the Ministry of Education policies that affect the narrowing of educational disparities and affirmative action for weak population groups.

## **1. Students and Teachers in the Education System**

### *a. Main Trends*

The principal achievement of Israel's education system has been its ability to cope successfully with the rapid increases in enrollment and to respond adequately to the growing student population's diverse needs. In the Jewish sector, the expansion stems from immigration, which has continued throughout the years and included several major waves, and, most recently, rapid natural increase largely among the *Haredi* ("ultra-Orthodox") population. In the Arab sector, the main sources of growth are natural increase, which has recently diminished, and a rise in school enrollment rates.

A brief description of the main developments follows:

- The increase in enrollment exceeds the increase in the number of classrooms and schools. Thus, both average class size and average school size have increased.

- The number of teaching posts<sup>1</sup> is increasing more rapidly than student enrollment. This is due to the way the number of working hours of a teacher is defined, the share of frontal teaching hours in the teacher's post, and the increases in classes and teaching hours per class.
- The rise in matriculation eligibility rates exceeds the rate of increase in enrollment. This is evidence of the rapid democratization of the education system, reflected in steadily rising rates of twelfth grade enrollment and of taking and passing the matriculation exams.
- The growth rates in the Arab sector, which are high in the selected indicators presented, attest mainly to this sector's much weaker starting position.

**Table 1. Selected Indicators of Education System Development, 1980-2007**

	Enrollment	Schools	Classes	Teaching posts	Eligible for matriculation
<b>Total</b>					
1980	1,200,636	2,367	30,409	72,840	12,400
2007	2,129,216	3,891	53,861	152,452	52,383*
Rate of increase	1.8	1.6	1.8	2.1	4.2
<b>Jewish sector</b>					
1980	1,023,410	1,996	25,291	64,222	11,100
2007	1,662,300	3,147	41,391	122,615	44,860*
Rate of increase	1.6	1.6	1.6	1.9	4.0
<b>Arab Sector</b>					
1980	177,226	371	5,118	8,618	1,300
2007	466,916	744	12,470	29,837	7,523*
Rate of increase	2.6	2.0	2.4	3.5	5.8

\* Data relates to 2005.

**Source:** CBS, *Statistical Abstract*, various years.

<sup>1</sup> A schoolteacher's post is a single organizational and administrative unit. (The posts at issue are only those financed by the Ministry of Education.)

- Enrollment rates have been rising impressively since 1980 (Table 2). At the primary school level in the Jewish sector, enrollment became virtually universal many years ago and the Arab sector was not far behind; by 2006, primary school enrollment was universal in both sectors. At the post-primary level, enrollment rates in the Arab sector have been rising very significantly. The progress of girls in this sector stands out; they have “caught up” to the boys and their rates are approaching full enrollment.

**Table 2. Enrollment Rates, Primary and Post-Primary Levels,  
Jewish and Arab Sectors, 1980-2006**  
(Per 1000 children)

	<i>6-13 cohort</i>	<i>14-17 cohort</i>	
	<b>Total</b>	<b>Boys</b>	<b>Girls</b>
<b><i>Jewish sector</i></b>			
1980	967	729	868
2006	946*	963	989
Rate of increase	1.0	1.3	1.1
<b><i>Arab sector</i></b>			
1980	944	580	440
2006	969	891	929
Rate of increase	1.0	1.5	2.1

\* The Central Bureau of Statistics data for the Jewish sector’s enrollment are skewed downward. This is due to disparities in the data on the population at large, originating in the 1995 population sample and to an increase in the number of children, mainly in the *Haredi* sector, who attend schools that are not included in the statistics.

**Source:** CBS, *Statistical Abstract*, various years.

- The rates of eligibility for matriculation certificates and high school graduation diplomas among twelfth graders are accepted as proxies for the evaluation of a country's educational achievements. In recent decades (since 1980), Israel's twelfth grade enrollment rate has been rising steadily (Table 3) and the rates of twelfth graders who sit the matriculation exams and qualify for certificates have also been rising continuously. However, large population groups are still not enrolled in the official education system and do not take matriculation exams (particularly the *Haredim* and part of the Arab sector). It is important to note that the share of these groups in the general population and among schoolchildren has been increasing steadily.

**Table 3. Twelfth Grade Age Group: Enrollment, Taking Matriculation Exams, and Qualifying for Matriculation Certificate (Percent)**

	1980	1990	2000	2005
Age group (thousand)	65.5	85.0	107.8	115.8
Age group	100.0	100.0	100.0	100.0
<i>of which:</i>				
• Enrolled in 12 <sup>th</sup> grade	54.2	72.2	77.9	80.2
• Take exams	—	51.8	68.1	72.6
• Qualify for certificate	21.3	31.4	40.8	43.8

**Source:** CBS, *Statistical Abstract*, various years.

Israel's achievements in education are also significant in the rising educational level of the adult population. Both population sectors, the Jewish and the Arab, have made considerable progress but are still substantially far apart (Table 4). However, given the large gaps that existed in Israel's early years, the direction of the trend is encouraging. It should also be kept in mind that the population includes large waves of immigrants who arrived with higher

education levels and are not products of the Israeli education system.

**Table 4. Israelis Aged 15+, by Type of Last School Attended**

	None	Primary/ lower secondary	Upper secondary/ <i>yeshiva</i>	Post- secondary/ higher education
<b><i>Jewish sector</i></b>				
1980	6.3	26.6	38.3	18.8
2006*	2.1	8.3	44.8	44.2
Rate of increase	0.3	0.3	0.9	2.4
<b><i>Arab sector</i></b>				
1980	19.3	50.0	23.6	7.1
2006	6.1	31.7	33.1	18.9
Rate of increase	0.3	0.6	1.8	2.7

\* The figures for 2006 pertain to Jews and other non-Arab population groups.

**Source:** CBS, *Statistical Abstract*, various years.

#### *b. Student Population – Main Changes in Composition*

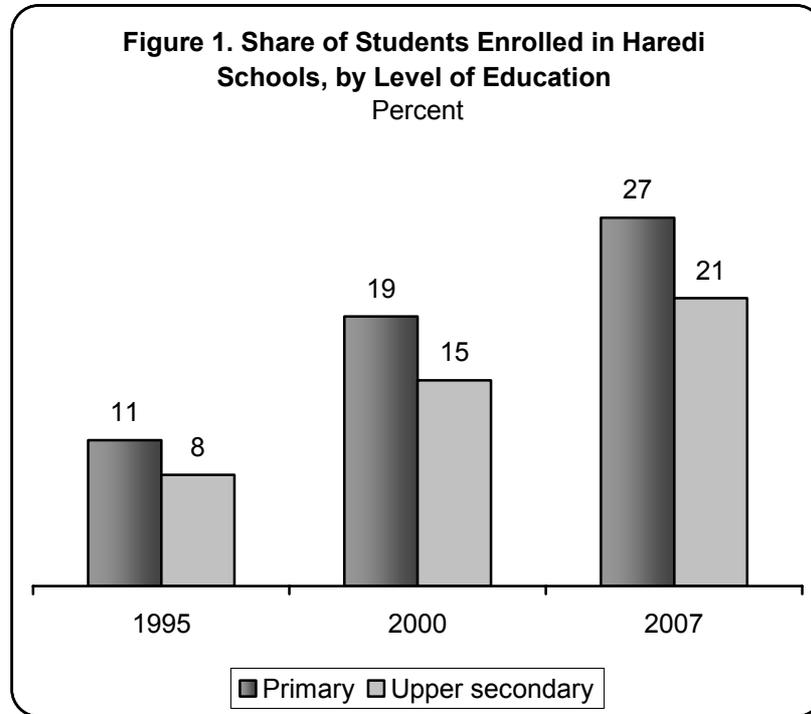
Some 33 percent of the country's population is of school age, as against 36 percent in 1990 and more than 38 percent in 1980. Israel has a higher share of children than most Western countries. Within this population are various sub-groups that differ in age structure and the rate at which their age composition changes. In the education system, these differences are reflected in the share of various population groups in total school enrollment. The changes in the national, religious, and socioeconomic composition of the student population are the most significant changes in the education system in recent years. They have major implications for various aspects of the system's future management, capabilities, and achievements.

**1) Composition by sector.** The two main sectors of the population are vastly different in their proportions within the school age cohort. In the Jewish sector, 30 percent of the population is aged 0-19. Christians in the Arab sector have much the same rate. However, the share is much higher among Muslims (48 percent) and Druze (40 percent). The rate of change among the two main population groups is also different: between 1995 and 2006, the proportion of children fell by 3 percentage points among Jews and by only 1 percent among Arabs.

In this respect, two processes have had contrasting effects on the composition of the student population. Immigration has had an upward impact on the share of the Jewish population. Natural increase, which expresses differences in birth rates, has been acting steadily to raise the proportion of Arabs, Bedouin, and Druze. Over the past decade, the proportion of Arab students rose rapidly and came to 28 percent of primary and lower secondary school enrollment in 2007.

**2) Trend towards Haredi education.** The most notable trend in the composition of Jewish students is reflected in their enrollment in the country's various school systems. In the past decade (since 1995), enrollment in *Haredi* schools has increased immensely, slowing slightly only in the past two or three years. The growth stems mainly from natural increase in the *Haredi* population, which greatly exceeds that of the non-religious and "national-religious" (modern Orthodox) Jewish populations.

Table 5 shows that, apart from the obvious fact of the proportional increase in *Haredi* enrollment, the *Haredi* systems grew much more quickly at the beginning of the decade (1995-2000) than it has since then. There are several indications of deceleration in the growth of the *Haredi* systems; the table reflects differences in the share of *Haredim* between first graders and the entire primary level in 2006.



**Table 5. Jewish Sector Enrollment, by School System, 1995-2007 (Percent)**

Level	1995			2000			2007		
	State	SR*	Haredi	State	SR*	Haredi	State	SR*	Haredi
1 <sup>st</sup> grade	68.3	21.4	10.3	60.4	19.2	20.4	56.6	19.5	23.9
Primary	68.2	21.3	10.5	60.9	19.7	19.4	54.6	18.9	26.5
Lower secondary	82.0	17.6	0.4	81.3	18.5	0.2	80.0	19.9	0.1
Upper secondary	73.8	18.2	8.0	68.0	17.2	14.8	62.3	17.0	20.7

\* State-Religious.

Source: CBS, *Statistical Abstract*, various years.

**3) A rise in the share of native-born Israelis.** A noteworthy trend in the demographic development of Israel's Jewish sector is the proportional increase in second generation native-born. During the review decade, the share of second generation natives rose from 67 percent to almost 80 percent in the 0-4 age cohort and from 36 percent to 55 among those aged 15-18 (Table 6). Thus, in 2006 a large majority of Jewish Israeli children were born to parents (or at least to one parent) who had been born in Israel.

**Table 6. Israel-Born (Jews), by Locality of Father's Birth, by Age (Percent)**

Age	1995		2000		2006	
	Israel	Abroad	Israel	Abroad	Israel	Abroad
0-4	67	33	71	29	79	21
5-9	57	43	62	38	73	27
10-14	48	52	54	46	65	35
15-19	36	64	45	55	57	43

**Source:** CBS, *Statistical Abstract*, various years.

### *c. Teachers – Older and Better Educated*

Israel's educational labor force changes from year to year. Several main changes stand out, some of which have occurred very rapidly. Just as the student population is typically divided among sectors in the education system, so, too, teachers tend to spend their entire careers in a specific school system and sector. The sectors operate in very different environments, at least at the primary and post-primary levels: in the Jewish sector, the size of the education system is stable if not contracting, whereas in the Arab sector it is expanding rapidly. In many respects, however, there is strong convergence between teacher characteristics in the two sectors (Tables 7 and 8).

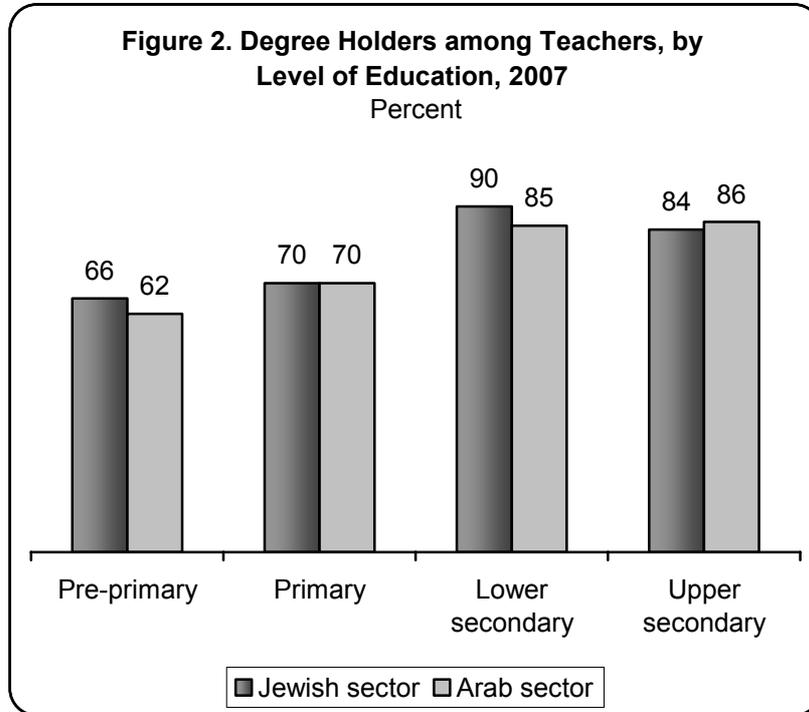
Aging is one of the main developments that is typical of the teacher population; another is the rise in their average seniority, largely due to the increase in age. Additional changes stand out in respect to teachers' education level and training, e.g., an increase in the share of degree-holders and changes in the average number of hours of a full-time teaching post.

The changes in the level of teachers' education and training are indicative of improvements in this field and may be one of the education system's most important achievements. Especially noteworthy is the significant decline in the numbers of non-certified teachers in the Arab sector and the parity that this sector has attained with the Jewish sector in the proportion of teachers holding degrees.

**Table 7. Teachers, by Levels of Certification, Primary Schools, 1980-2007** (Percent distribution)

	Degree- holding	Senior	Certified	Non-certified
<i>Jewish sector</i>				
1980	14.8	21.6	48.5	15.6
2007	70.4	20.7	4.9	3.9
<i>Arab sector</i>				
1980	8.6	6.1	57.8	27.5
2007	69.7	21.4	3.2	5.7

**Source:** CBS, *Statistical Abstract*, various years.



The academization of the teaching force is nearly complete at the post-primary level and is progressing at the pre-primary level, in which more than 60 percent of preschool teachers hold academic degrees, and at the primary level, where their share comes to 70 percent (see also Table 8).

The changes in average size of teaching post are different at various levels of the education system. At the pre-primary level, the average kindergarten teaching post has decreased in both the Jewish and the Arab sectors, possibly because substitute preschool teachers may be employed one day per week. At the other levels of education, in contrast, the size of posts has been trending up in the Jewish sector and declining in the Arab sector. This process is

narrowing the gaps between the sectors, although teaching positions in the Arab sector remain larger.

In general, the teacher population is aging and the share of older teachers is rising in correlation with levels of education, so that 37.5 percent of teachers at the upper secondary school level are over fifty years of age. The process is slower in the Arab sector than in the Jewish sector, because the rapid growth of the Arab sector in recent years has meant the hiring of young teachers, especially at the preschool and post-primary levels.

The aging of the teacher population has implications for projected teacher demand. In the near future, it will lead to substantial retirement and may result in a shortage of teachers in certain sectors, areas, and subjects. To cope with such a shortage in the short run, it may be advisable to offer teachers incentives to increase their posts and defer their retirement, on the one hand, and to encourage retired teachers to re-enter the system, on the other hand. In the long term, adequate numbers of student teachers and others joining the system from other sources must be assured.

**Table 8. Selected Characteristics of Teaching Personnel,\*  
1995-2007**

Level	Jewish sector			Arab sector		
	1995	2000	2007	1995	2000	2007
<b><i>Pre-primary</i></b>						
Age: up to 29 (%)*	15.9	9.4	7.2	41.5	37.9	31.1
50+ (%)*	10.4	18.5	32.6	3.4	5.0	8.3
Degree holders (%)*	14.6	36.3	66.0	1.8	18.0	61.5
Avg. work hours per week	24.6	25.2	22.3	26.3	28.6	24.3
Avg. seniority (years)	13.5	16.2	18.2	11.4	10.1	10.8
<b><i>Primary</i></b>						
Age: up to 29 (%)*	18.7	18.6	11.9	27.9	33.7	31.2
50+ (%)*	12.4	17.9	25.4	7.0	7.9	12.2
Degree holders (%)*	31.2	52.5	70.4	16.4	38.8	69.7
Avg. work hours per week	20.6	20.7	21.1	24.4	24.1	23.4
Avg. seniority (years)	13.8	14.4	16.0	13.4	12.5	11.7
<b><i>Lower secondary</i></b>						
Age: up to 29 (%)*	14.2	12.9	5.3	23.2	27.1	21.1
50+ (%)*	14.0	21.8	34.3	7.6	9.6	13.6
Degree holders (%)*	60.2	77.2	90.4	43.0	64.9	85.1
Avg. work hours per week	18.8	19.3	19.7	19.8	20.0	20.1
Avg. seniority (years)	14.7	15.7	18.7	13.4	13.3	13.8
<b><i>Upper secondary</i></b>						
Age: up to 29 (%)*	10.5	9.9	7.0	23.9	21.8	19.2
50+ (%)*	22.2	30.8	37.4	9.7	12.6	16.2
Degree holders (%)*	69.9	77.2	83.6	72.9	73.9	85.8
Avg. work hours per week	18.8	18.4	19.8	22.0	21.8	22.5
Avg. seniority (years)	17.1	18.3	19.7	12.3	13.1	13.6

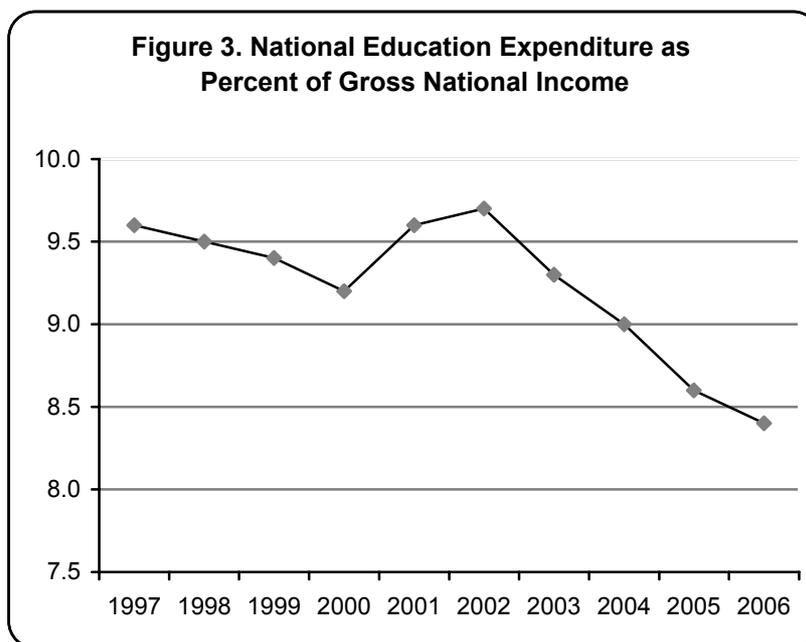
\* The age and educational characteristics are calculated as a percent of the teacher population at large.

Source: CBS, *Statistical Abstract*, various years.

## 2. Resource Allocation for the Education System

### *a. Changes in National Education Expenditure in the Past Decade*

Several yardsticks may be used to determine whether the level of resources for education has risen or fallen in the past decade. National expenditure, expressed in constant prices, grew from NIS 40 billion to NIS 45 billion between 1997 and 2002 and has been more-or-less stable since then. During the same years, however, national education expenditure relative to gross national income fell steeply, from 9.7 percent in 1997 to 8.4 percent in 2006. Although this rate is high by Western standards – the OECD average was 6.3 percent in 2004 – it also reflects the large differences among the countries in the composition of their populations. The share of children in Israel's population far exceeds the OECD average.



**Table 9. National Education Expenditure, 1997-2006**  
(Absolute and Percent of GNP)

1997	1998	1999	2000	2001	2002	2003	2004*	2005*	2006*
<i>Absolute, NIS billions, 2000 prices</i>									
39.5	40.9	42.0	42.8	44.5	45.3	45.0	45.1	44.1	45.0
<i>Percent of GNP</i>									
9.6	9.5	9.4	9.2	9.6	9.7	9.3	9.0	8.6	8.4

\* Estimates.

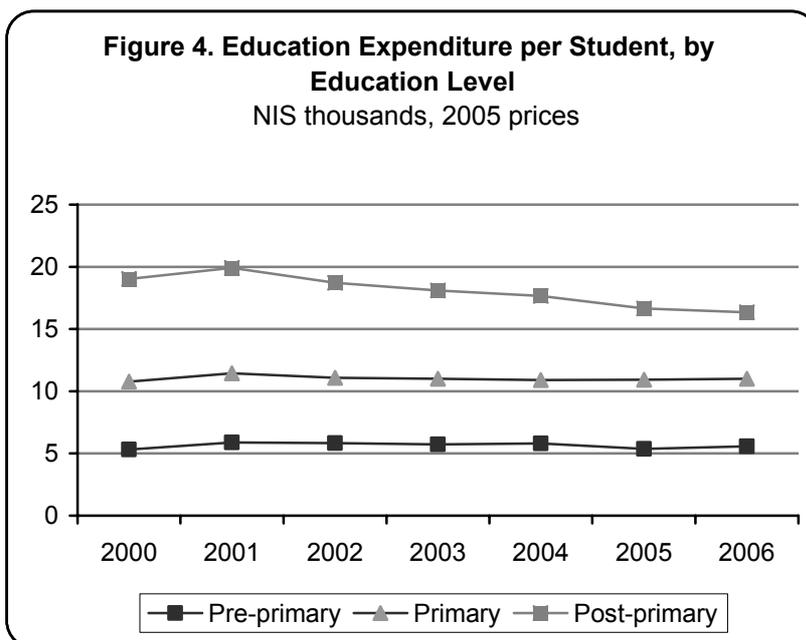
**Source:** CBS, *Statistical Abstract*, various years.

Government expenditure is a central component in national education expenditure. Concurrent with the decline in the ratio of national education expenditure to GNP – explained by the different growth rates of national education spending and the GNP – the share of government in education funding declined from 80 percent in the mid-1990s to 75 percent in 2004-2005. Some of the difference is accounted for by an increase in private expenditure for higher education. (See also the chapter “*Government Expenditure on Social Services*” in this report.)

By analyzing the changes in government resource allocation on a **per student** basis, the size of the student population can be taken into account. Table 10, based on Taub Center data, indicates, notwithstanding certain fluctuations, an uninterrupted decline in average per student expenditure (in constant prices) since 2001. The development of this trend, however, has been separate at different levels of education. At the pre-primary level, real expenditure increased by 10 percent between 2000 and 2006. At the primary level, it remained largely unchanged since 1997. This, however, is due to an increase in special education budgets indicating that the budget for mainstream primary education has actually contracted. Finally, spending at the post-primary level has declined by almost 20 percent.

**Table 10. Per Student Education Expenditure, 1997-2006, by Levels of Education, Current Budget (NIS, 2005 Prices, deflated by the Public Civilian Consumption Price Index)**

	<b>Total</b>	<b>Pre-primary</b>	<b>Primary</b>	<b>Post-primary</b>
1997	17,258	5,083	10,843	20,308
2000	16,934	5,319	10,781	19,027
2001	17,405	5,883	11,430	19,913
2002	16,555	5,845	11,070	18,733
2003	16,256	5,740	10,992	18,107
2004	15,332	5,807	10,890	17,659
2005	15,030	5,360	10,924	16,651
2006	14,851	5,591	11,000	16,358



Source: Taub Center.

Can these changes stem from government education policy? This question should be examined by level of education:

**Pre-primary:** the increase in per student expenditure at this level reflects the extension of compulsory education to the 3-4 year old age cohort. An especially large increase considering the steep growth in pre-primary enrollment among the Arab and Bedouin sectors is noted in the past few years.

**Primary:** the apparent stability in expenditure at the primary school level, despite recurrent decisions on budget cuts, is explained by the rise in the budget for special education. In addition, the rising proportion of *Haredim* in total primary enrollment contributed to a more moderate rise in costs to compensate for natural increase. This is because of the lower per student cost of *Haredi* primary education. In addition, budget supplements were given in order to implement a change in the method of budgeting primary education and to implement the Integration Law.

**Post-primary:** the per student allocation at this level of education fell by 20 percent. Half of the decline stems from a cutback in hours per student. The other half – a 10 percent decrease since 2001 in average teaching hours per student and per class at both the lower and upper secondary school levels – originates in the considerable cutbacks in *yeshiva* budgets and the reduction in expenses for extracurricular activities. Shifts in the distribution of students between academic and technological programs of study also may have made a cumulative contribution to the decrease in per student expenditure. (Technological programs are 1.5 times more expensive per student than academic programs.)

*b. International Comparison*

A comparison of Israel with the OECD countries in national education expenditure shows that relative disparities have widened in the past decade. There is a significant difference between Israel and the OECD countries in the trends of national per student education expenditure. Table 11 shows the two main developments that the comparison brings to light:

1) In 2004, Israel invested less than the OECD average in per student terms at all levels of education, and at all levels other than primary education the situation has worsened in the current decade relative to the mid-1990s.

2) Israel's relative standing in comparison with the OECD countries is especially bad at the post-secondary and pre-primary levels and is reasonable at the primary level. The cumulative expenditure per student throughout the whole school system (primary and post-primary) amounts to \$81,485 in the OECD countries (\$33,768 at the primary level and \$47,717 at the post-primary level) and \$67,548 in Israel (\$31,152 and \$36,396, respectively). Thus, Israel invests 92 percent of the OECD average in primary education and only 76 percent of the OECD average in the post-primary level.

Additional data (OECD, 2007) show that the rate of increase in per student expenditure was much higher in the OECD countries than in Israel. Between 1995 and 2004, Israel's rate of increase was only 5 percent, as against 38 percent on average in the OECD countries and 37 percent in the nineteen European Union countries.

**Table 11. Per Student Expenditure by Education Levels, Israel and OECD (\$US, PPP)\***

	Israel	OECD	Israel/OECD
<i>Pre-primary</i>			
1995	2,763	2,631	1.05
2004	4,278	5,146	0.83
<i>Primary</i>			
1995	3,485	3,595	0.97
2004	5,192	5,319	0.98
<i>Post-primary</i>			
1995	4,776	4,971	0.96
2004	6,066	7,150	0.85
<i>Post-secondary</i>			
1995	10,446	10,444	1.00
2004	11,289	14,536	0.78

\* The data differ slightly from those in OECD (2007).

**Source:** CBS, *Statistical Abstract*, various years.

There is no doubt that the relative disparities between Israel and the OECD countries in per student expenditure have widened, especially at the post-primary level. This finding is relevant for the debate in Israel in recent years about the country's poor performance on various international tests – which, for the most part, are conducted among students in the education levels in which Israel's investment has been reduced.

### *c. Budget Increase and Scholastic Achievement*

The prevailing social consensus about the importance of investing in education has not been reflected in Israel's education budgets in recent years. Given the change in the composition and profile of the student population, the overall national standard of living, and

the wish to strengthen the scholastic and educational achievements of Israel's students, the budget should be expanded by at least 1-2 percent per year in real terms.<sup>2</sup> Real cutbacks in per student budgeting, at the primary and the post-primary levels, attest to a disregard of both developments in the education system's socioeconomic environment and the decreases in budgeting that have already occurred, especially at the post-primary level, resulting in a decline in the quality of service for students.

The demand to increase the education budgets and treat them as an investment is correct in social justice terms and well grounded in research. Even if the connection between financial investment and scholastic outcome is not always clear, the correlation between level of education, income and quality of life has been proven beyond all doubt. A recent American study shows that every dollar invested in keeping youngsters from dropping out of school yields \$1.50-\$3.50 in return, depending on the program applied (Levin, Belfield, Muenning, Rouse, 2007). In Israel, where some 40 percent of students find it difficult to attain a level of education and skills that will insure integration into the modern economy, narrowing the gap is not only an important goal from the value and moral standpoints but also an important economic goal.

To admit Israel into the class of the world's leading countries in education, a budget increase is needed. Recurrent claims about "inefficiency and waste" in the education system and the need to prune the system's "bloated administration" in order to reassign massive resources to improving student performance are groundless. Administrative expenditure at the Ministry of Education amounts to 3 percent of the education budget, and reducing it will not put the education system on the road to success. Furthermore, education systems need administration and

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<sup>2</sup> See detailed discussion in last year's report.

supervision. After all, one cannot efficiently supervise more than 4,000 education institutions without hundreds of inspectors, and, as the education system becomes more and more decentralized, it will need even more supervision. Therefore, the transfer of executive powers to localities or schools will not necessarily save on administrative staff; it will merely shift it from the center to periphery. There is no doubt that the Ministry of Education should be made more efficient. Israel's education system and its budget are large and paths to improved efficiency can undoubtedly be found. One cannot assume, however, that qualitative changes can be made in the system without additional and significant financial investment.

### **3. Ministry of Education Policy for the Advancement of Weaker Population Groups<sup>3</sup>**

The education system has an important role to play in the narrowing of educational achievement disparities between students from different socioeconomic backgrounds, including affirmative action for students from weaker family background, who typically have educational deficiencies.<sup>4</sup> The increase in the return on education in recent decades makes it even more important to narrow the substantial inequality in educational achievements as a way to narrow socioeconomic gaps, especially since income differentials in Israel are amongst the highest in the Western world today.

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<sup>3</sup> This section was co-authored by Noam Zussman of the Bank of Israel Research Department. The views expressed here do not necessarily reflect those of the Bank of Israel.

<sup>4</sup> Studies show that parents' income and education make a positive contribution to their children's income and education when other variables are held constant. In regard to the Israeli case, see Beenstock, 2002.

Various forms of intervention to reduce educational inequality are available to the education system. One of the most important and efficient of them is affirmative action in allocating teaching hours and personnel for students from socioeconomically weak backgrounds. Studies in various countries show that increasing the number of teaching hours by reducing class size<sup>5</sup> helps to some extent in enhancing educational achievements and has more impact among students in lower grade levels and from weak population groups (Angrist, Lavy, 1999). While background factors, such as parents' level of education, have a stronger effect on educational achievement than resource allocation, these factors are outside the immediate influence of public policy, at least in the short term.

Israel's education system has various settings that are designed to strengthen weaker population groups, through transparent and uniform criteria for resource allocation and the use of affirmative action. This is not enough, though, since disadvantaged students continue to score lower on scholastic achievement tests. Evidence for this can be seen in results of the *Meitzav* (index of school efficiency and growth) exams, the eligibility rate for matriculation certificates and the level of the certificates earned, and, especially, the enrollment rate in higher education. Furthermore, the ministry's budget as it stands today does not devote adequate attention to narrowing gaps, as becomes evident in reading the explanatory notes to the budget. The advancement of weak population groups and the narrowing of disparities, formerly among the ministry's three main goals, currently rank in **eighth** place. In terms of active

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<sup>5</sup> Per student teaching hours can be presented in terms of teaching hours per class by adding up the hours of all students in the class. For example, if each of twenty students in a given class is credited with 1.5 teaching hours per week, thirty teaching hours per week are available to the class during the school year. By increasing the number of weekly teaching hours per student, one may reduce class size and/or give the class more weekly teaching hours.

policy, the ministry has made two significant decisions: one pertains directly to reducing the share of the budget earmarked for the strengthening of weaker population groups; and, the second involves changes in primary school budgeting that serve to weaken policies of affirmative action.

*a. Budgets Earmarked for the Advancement of Weaker Population Groups*

Resources to programs for the advancement of socioeconomically weak population groups and the narrowing of gaps have been declining in the past decade. The budget for the Ministry of Education contains several items that aim to advance weaker population groups; they may be divided into four groups. Table 12 shows the cutback in affirmative action budgets since the mid-1990s in terms of their share in the ministry's total budget. The trend continued in fiscal year 2007, when notable cuts were made in the budget of the *Shahar* Division (in charge of the advancement of students from socioeconomically weak backgrounds) and budgets earmarked for recent immigrants and students in peripheral areas.

Furthermore, the affirmative action of recent years would possibly have been even weaker had all the Knesset's decisions about extending the Compulsory Education Law to the 3-4 year old age cohort been carried out, and had the Long School Day Law been implemented in the entire education system. The partial implementation of these programs meant that they were started mainly in areas and schools that serve students from socioeconomically weak backgrounds. On the other hand if the per student budgeting method which takes socioeconomic data into account had been applied at the post-primary level of education as well, the extent of affirmative action would have risen significantly.

**Table 12. Ministry of Education Budgets for Weaker Population Groups, 1995-2007**  
(Percent of total approved budget, by groups\*)

<b>Target group</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2007</b>
Group A	0.98	1.09	0.78	0.69
Group B	5.89	5.06	6.31	6.35
Group C	0.67	1.50	1.00	0.91
Group D	2.56	2.26	1.14	1.02
<b>Total</b>	<b>10.10</b>	<b>9.91</b>	<b>9.23</b>	<b>8.98</b>

**Source:** Ministry of Finance budget processed by Taub Center.

\*The groups include the following budget items:

**Group A** – budget items under the responsibility of the *Shahar* Division, whose sole purpose is the advancement of weaker population groups. (There are additional items for special allocations of weekly teaching hours for weak population groups which are **not** expressed in budget terms.)

**Group B** – items administered by other ministry units for activities and settings that serve youngsters mainly on the basis of socioeconomic criteria (parents' income, parents' education, year of immigration, geographic and social periphery, etc.). Sometimes this involves a combination of socioeconomic background data and poor educational achievements (e.g., programs such as afternoon care centers, Project *Ometz*, Youth Centers, etc.).

**Group C** – items administered by other ministry units for activities and settings that admit students solely on the basis of scholastic achievement criteria but cater mainly to socioeconomically weak population groups (e.g., pre-academic preparatory programs, *Hamifal* Educational Children's Homes, various residential programs in the rural settlement sector, and institutions formerly associated with Youth Aliyah).

**Group D** – items administered by other ministry units that serve the population at large but include separate components for weaker population groups, or in which most beneficiaries belong to such groups (e.g., recent immigrants and students in peripheral areas).

*b. Revision of the Budgeting Method for Primary Education*

The “Potential Educational Deficiency Index” and the budgeting method for primary education were revised recently. The first change should contribute to advancing equity in the education system while the second one operates strongly in the opposite direction.

Until the 2003 school year, primary education was budgeted through a basic per class classroom hours allocation while affirmative action was achieved by allocating additional classroom hours by means of “program baskets” designated for remedial classes and other purposes. From the 2004 school year to 2007, a different method was used: teaching hours were allocated on a differential per student basis, using an “Index of Educational Deficiency” that takes into account individual background factors.<sup>6</sup> Students were divided into deciles on the basis of the “Potential Educational Deficiency Index” in such a way that those in the lowest decile, that is, from the weakest socioeconomic background, would receive 60 percent more teaching hours than their counterparts in the highest decile.<sup>7</sup>

The “Potential Educational Deficiency Index” that was worked out following the Shoshani Committee’s report had two notable drawbacks: it did not take into account household income; and, it gave greater weight to students’ residence in a Class A “National Priority Area.” The High Court of Justice, after being petitioned in

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<sup>6</sup> The Taub Center proposed the adoption of this method for several years in its annual reports and it was endorsed by a committee chaired by the former Director-General of the Ministry of Education, Dr. Shimshon Shoshani. It was first implemented in the primary school education system.

<sup>7</sup> The Shoshani Report recommendations were implemented gradually and ran into difficulties due to severe cutbacks in the Ministry of Education budget and the wish to assure a safety net of per class teaching hours.

the matter, ruled in early 2006 that basing any form of allocation of educational resources on the map of “National Priority Areas” is illegal because it discriminates against students in the Arab sector.<sup>8</sup> Thus, the Ministry of Education worked out a new educational deficiency index (the “Strauss Index”), which omitted the criteria of “National Priority Area” and number of siblings but included annual gross household income per standard person among its changes.

Under the “Strauss Index”, teaching hours for affirmative action – beyond the basic standard that is allocated equally among all students – are apportioned in a way that gives a student in the lowest (weakest) deficiency decile three times as many additional hours as one in the highest decile. On the face of it, the new index, which went into effect in the current school year (2008), is better than the previous one because it strengthens the connection between the allocation of teaching hours and students’ potential educational deficiency. This advantage, however, is totally canceled out because the resources devoted to affirmative action are being drastically reduced due to a change in the allocation method for teaching hours.

Since the partial implementation of the Shoshani Report, all teaching hours in primary education have been allocated in accordance with the “Strauss Index.” However, since the introduction of the new method, the allocation is in two stages. First, most of the budget is divided in order to insure an **essential minimum** number of teaching hours – 36 hours per week for every class that has more than twenty students (plus a variable increase in hours for each additional student in the class); the remaining budget is allocated for affirmative action. This change in itself would not harm the policy of narrowing disparities if the resources

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<sup>8</sup> HCJ 11163/03, Feb. 27, 2006.

were sufficient to allow a level of affirmative action resembling that offered by the previous method. In practice, this has not happened. Analysis of the allocation shows that the new method leaves only a small fraction of the education budget – a few percent – for affirmative action.

*c. The Change to the Two-Stage Budgeting Method*

The narrowing of educational inequalities by means of an affirmative action policy is a central goal that should be endorsed even during economic slumps and budget distress. Therefore, the recently adopted approach in which the allocation of teaching hours for affirmative action is a residual, that is, the number of hours left over after the “essential minimum” of hours is allocated on an equal basis for the population at large, clashes with this policy.

The term “essential minimum” lends itself to varying interpretations. In 2006, for example, the Ministry of Education allocated an “essential minimum” of 35 teaching hours per week at the lower secondary school level, 11 percent fewer than five years earlier. (In 2000, the minimum was set at 39 weekly hours.) At the primary level the “essential minimum” under the new method was set at 36 hours. It is not clear why the “essential minimum” at the primary level is higher than that in lower secondary schools and why it has been changing over the years.

The two-stage budgeting method, newly implemented in the 2008 school year, was adopted after the Ministry of Education encountered two main difficulties. First, the former method was unable to assure a minimum of teaching hours for some of the schools. Full implementation of the per-student differential standard would have required an extra 160,000 weekly teaching hours (at a cost of NIS 700 million). Second, if all hours were to be allocated in accordance with the Strauss Index and according to the per student differential standard, some would have to be transferred

from the Jewish education system – largely from the State-Religious system – to the Arab system.<sup>9</sup>

The changeover to the two-stage system and the determination of 36 teaching hours per week as the “essential minimum” leaves only 50,000-60,000 teaching hours, 5-6 percent of the total, for affirmative action at the primary school level. Under the method that preceded the implementation of the Shoshani Report (in which specific allocations of teaching hours were made for correction of educational deficiencies, immigrants, National Priority Areas, etc.), at least 12-15 percent of total standard hours were reserved for the correction of educational deficiencies. Furthermore, had the method of differential per student standard, the one used in the past three years, been fully applied, the allocation under socioeconomic criteria would have added up to around **one-fourth** of total teaching hours in the education system.

These calculations and comparisons show that the move to the two-stage method has reduced affirmative action in primary education. The negligible increase in hours for students who have severe educational deficiencies cannot make a meaningful contribution to their advancement and to the narrowing of gaps in scholastic achievements.

According to estimates from the Ministry of Education, if the primary education budget were increased by 160,000 hours and the entire increment were devoted to affirmative action, the new budgeting method would be preferable to the former per student differential standard method that was applied following the Shoshani Report.<sup>10</sup> Our calculation indicates that full

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<sup>9</sup> The number of hours at issue is only several tens of thousands according to Taub Center estimates.

<sup>10</sup> Remarks by M. Sagui, Deputy Director of the Ministry of Education Economics and Budgets Administration, to the Knesset Education Committee (July 11, 2007).

implementation of the per student differential standard would result in the allocation of 260,000 teaching hours by socioeconomic criteria, whereas the new two-stage budgeting method would add 160,000 hours plus the 50,000 hours that are earmarked for affirmative action, i.e., 210,000 hours for this purpose. By way of example, Table 13 presents a class with forty students from a strong socioeconomic background (uppermost decile) who – if the Ministry of Education budget really were increased by 160,000 hours – would receive, after the added increment, around 50 weekly teaching hours under both budgeting methods. The students from the weakest background, in contrast, would receive only 62 hours under the two-stage method but would benefit from 80 hours (and even 88 hours in the State-Religious school system, as a case in point) if the per student differential standard were used.

The table shows the new budgeting method reduces affirmative action relative to the previous method and transfers teaching hours from schools that serve socioeconomically weak students to those that cater to students from stronger backgrounds.

#### *d. Ways of Promoting Affirmative Action – Summary*

The policy of affirmative action and the advancement of students from socioeconomically weak backgrounds coupled with the reduction of inequality in education are important goals of Israeli society and the Ministry of Education. Even though reaching these goals involves many difficulties, they are attainable.

In recent years, the number of per student teaching hours in the regular primary education system has been reduced continually. According to the Ministry of Education, it would take another 160,000 hours (at a cost of NIS 700 million) to complete the process of diminishing inequality in the system. The ministry, however, has recently changed its budgeting method in a way that

**Table 13. Allocation of Weekly Teaching Hours per Class, by Budgeting Method, and by Number of Students per Class and Scholastic Deficiency Decile, Present Budget and Budget plus 160,000 Teaching Hours**

Students in class	Scholastic deficiency decile	Present budget		Budget + 160,000 teaching hours	
		Two-stage method	Differential standard	Two-stage method	Differential standard
20	Upper – strong students	36.6	36.0	38.7	36.0
20	Middle	37.2	36.0	41.2	36.0
20	Low – weak students	38.7	63.0	44.3	40.0
30	Upper–strong students	38.8	36.0	42.0	37.5
30	Middle	39.6	40.3	45.7	47.4
30	Low – weak students	40.7	44.6	50.3	60.0
40	Upper–strong students	46.7	42.5	50.9	50.0
40	Middle	47.8	53.7	56.0	63.2
40	Low – weak students	49.2	59.5	62.1	80.0

**Source:** Taub Center calculations.

only appears to help reduce inequality, because the new method includes changes that will divert resources from weak students to strong ones, dealing a severe blow to the affirmative action policy that has been a ministry mainstay for years.

The ministry took this step instead of reinforcing its policy by increasing the primary education budget and freeing additional resources for socioeconomic weak students by reshuffling its budget lines and revisiting its policies.

Two aspects relating to primary education deserves emphasis in this context. First, the new budgeting method, by insuring a minimum number of hours by class size, affects the Jewish sector mainly by benefiting students from strong socioeconomic backgrounds who attend either very small or very large classes, who under the "per student differential standard" were receiving fewer teaching hours on average. This aside, the extra increment for class size encourages larger class size and is too small to allow schools to divide a class even if this would be in its interest. Consequently, the reallocation of some or all of the additional hours for class size to affirmative action can increase if not double the number of affirmative action hours even under the new budgeting method.

The second aspect has to do with the long school day. In the new budgeting method, some 580 schools continue to offer a long school day and 71,000 teaching hours were allotted for this purpose in 2007. According to data from the Ministry of Education, only half of the schools and students who benefit from the long school day today are in the three lowest socioeconomic deciles; therefore, the implementation of the long school day has had only a limited effect on the extent of affirmative action. Implementation of the long school day should focus on schools that cater to socioeconomically weak students to counteract the harm caused them by the new system at allocating class hours.

Beyond this, the per student differential standard should be adopted with minor changes at **the post-primary level** as well. This would bolster affirmative action in lower and upper secondary schools without depriving socioeconomically strong students of an adequate level of education. Such a move would not significantly harm schools whose curricula include technological programs of study. It would cause the choice of programs by students (and parents) and the schools' admission policies to be influenced mainly by educational considerations – the benefit to the student and his wishes and qualification – and not by budget considerations (related to the budget allocation for the individual student based on his program of study). A better fit between students' and parents' wishes and qualifications and the contents taught at school would induce students who have more to gain from various technological-practical programs to choose them – a choice that would serve them favorably and benefit the economy and society as well.

The adoption of a per student differential standard at all levels of education would also allow another goal to be attained: the alignment of class size and number of teaching hours with educational needs. The differential standard awards extra teaching hours to schools that cater to socioeconomically weak students, and these schools are usually characterized by more overcrowding (especially in the Arab and Bedouin sectors). The combination of the per student differential standard and narrowing of the compulsory curriculum would encourage the administrations of schools that enroll socioeconomically weak students, in conjunction with the teachers, to choose between alternatives: reducing class size while leaving in place the framework of teaching hours that allows the obligatory curriculum to be taught, or increasing the allotment of hours per class. The choice would be made in accordance with the school's quota of available hours, its educational outlook, and its needs.

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